



#11

# SEQUENCE LISTING

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PRILLIMAN, KILEY RAE

<120> METHOD AND APPARATUS FOR THE PRODUCTION OF ANTIGENS AND  
USES THEREOF

<130> 6680.034

<140> US 10/022,066

<141> 2001-12-18

<150> 60/256,410

<151> 2000-12-18

<150> 60/256,409

<151> 2000-12-18

<150> 09/465,321

<151> 1999-12-17

<150> 09/974,366

<151> 2001-10-10

<160> 638

<170> PatentIn Ver. 2.1

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Ala Met Ala Glu Ser Ser Trp Glu Trp

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Gly Ser His Ser Met Arg Tyr Phe  
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Gly Gln Arg Lys Gly Ala Gly Ser Val Phe  
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Gly Lys Val Arg Thr Asp Ile Thr Tyr

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Ser His Ala Gln Thr Val Val Leu

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Ser Gln Phe Gly Gly Gly Ser Gln Tyr

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Val Gln Gly Pro Val Gly Thr Asp Phe

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Tyr Met Ile Asp Pro Ser Gly Val Ser Tyr  
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Gly His Ser Pro Pro Thr Ser Ser Leu  
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Leu Pro Pro Pro Pro Pro Pro Pro  
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Asn His Ala Asn Gly Leu Thr Leu  
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Glu His Val Ala Ser Ser Pro Ala Leu  
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His His Ser Asp Gly Ser Val Ser Leu  
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Gln Pro Gly Pro Gln Ile Val Tyr  
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Asn Met Asn Asp Leu Val Ser Glu Tyr  
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Thr His Thr Gln Pro Gly Val Gln Leu  
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Ser His Ala Asn Ser Ala Val Val Leu  
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Gly Gln Tyr Pro Thr Gln Pro Thr Tyr  
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Val Lys Val Ile Gln Gln Glu Ser Tyr  
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Ala Met Asn Pro Thr Asn Thr Val Phe  
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Cys Pro Leu Ser Cys Phe Thr  
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Met Pro His Ser Gly Tyr Gly Phe  
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Cys His Ser Ala Phe Ala Leu  
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Leu His Leu Leu Thr Leu Glu Ala  
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Lys Asn Ala Asn Leu Val Gln Leu Tyr  
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<210> 65

<211> 9

<212> PRT

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His Met Ser Gly Glx Pro Thr Ser Tyr  
1 5

<210> 66

<211> 9

<212> PRT

<213> Artificial Sequence

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<223> Description of Artificial Sequence: Synthetic peptide

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His Asn Glx Ala Ala His Glx Glu Tyr  
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<210> 67

<211> 9

<212> PRT

<213> Artificial Sequence

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<223> Description of Artificial Sequence: Synthetic



peptide

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His Ala Ala Xaa Tyr Ser Glx Val Tyr  
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<210> 68

<211> 7

<212> PRT

<213> Artificial Sequence

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<223> Description of Artificial Sequence: Synthetic  
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<400> 68

Tyr Gln Ser Asp His Arg Tyr  
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<210> 69

<211> 7

<212> PRT

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peptide

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<222> (2)

<223> Unknown amino acid

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His Xaa Ser Thr Glx Asp Phe  
1 5

<210> 70

<211> 9

<212> PRT

<213> Artificial Sequence

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His Ala Pro Pro Thr Asp Pro Pro Pro  
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His Gly Pro Ala Asn Arg Asp Ser Val Phe  
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<210> 72  
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<212> PRT  
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Phe Pro Tyr Pro Thr Asp Pro Glx Tyr  
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<210> 73  
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<220>  
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<223> Unknown amino acid

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Glx Asn Ala Asn Xaa Val Glx Xaa Tyr  
1 5

<210> 74  
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Arg Ser Phe Xaa Xaa Glu Asn Glu Tyr  
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<211> 8

<212> PRT

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His Met Glx Asn Pro Thr Ser Tyr  
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<210> 76

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<212> PRT

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<222> (3)

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<222> (5)..(8)

<223> Unknown amino acid

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Tyr Val Xaa Phe Xaa Xaa Xaa Xaa Val Tyr  
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<210> 77

<211> 9

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<223> Unknown amino acid

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Arg Ser Met Xaa Arg Cys Pro Glu Tyr  
1 5

<210> 78

<211> 9

<212> PRT

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Xaa Xaa Phe Val Thr Ala Glx Thr Tyr  
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Met Tyr Asn Cys Asn Glu Xaa Asp Tyr  
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<210> 80

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<212> PRT

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Asn Gln Phe Gln Ala Leu Leu Gln Tyr  
1 5

<210> 81

<211> 18

<212> PRT

<213> Artificial Sequence

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<223> Description of Artificial Sequence: Consensus sequence

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Tyr Tyr Ala Val Gly Val Arg Phe Met Arg Glu Ile Ser Asn Tyr Tyr  
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Leu Trp

<210> 82

<211> 18

<212> PRT

<213> Homo sapiens

<400> 82

Tyr Tyr Ala Val Gly Val Arg Phe Met Arg Asn Ile Phe Asn Tyr Tyr  
1 5 10 15

Leu Trp

<210> 83

<211> 18

<212> PRT

<213> Homo sapiens

<400> 83

Tyr Tyr Ala Val Gly Val Arg Phe Met Arg Asn Ile Ser Asn Tyr Tyr  
1 5 10 15

Leu Trp

<210> 84

<211> 18

<212> PRT

<213> Homo sapiens

<400> 84

Tyr Tyr Ala Val Gly Val Arg Phe Met Arg Asn Ile Ser Asn Tyr Tyr  
1 5 10 15

Leu Trp

<210> 85

<211> 18

<212> PRT

<213> Homo sapiens

<400> 85

Tyr Tyr Ala Val Gly Val Arg Phe Met Arg Glu Ile Ser Asn Tyr Tyr  
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Leu Trp

<210> 86

<211> 18

<212> PRT

<213> Homo sapiens

<400> 86

Tyr Tyr Ala Val Gly Val Arg Phe Met Arg Glu Ile Ser Asn Tyr Tyr  
1 5 10 15

Leu Gly

<210> 87

<211> 18

<212> PRT

<213> Homo sapiens

<400> 87

Tyr Tyr Ser Val Gly Val Arg Phe Glu Arg Glu Ile Ser Asn Tyr Tyr  
1 5 10 15

Leu Trp

<210> 88

<211> 18

<212> PRT

<213> Homo sapiens

<400> 88

Tyr Tyr Ser Val Gly Val Arg Phe Glu Arg Asn Ile Cys Asn Tyr Tyr  
1 5 10 15

Leu Trp

<210> 89  
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<400> 89  
Tyr Tyr Ser Val Gly Val Arg Phe Glu Arg Asn Ile Cys Asn Tyr Tyr  
1 5 10 15

Leu Trp

<210> 90  
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Tyr Tyr Ser Val Gly Val Arg Phe Glu Arg Asn Ile Cys Asn Tyr Tyr  
1 5 10 15

Leu Trp

<210> 91  
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<400> 91  
Tyr Tyr Ala Val Gly Val Arg Phe Met Arg Glu Asn Met Ser Tyr Tyr  
1 5 10 15

Leu Trp

<210> 92  
<211> 18  
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<400> 92  
Tyr Tyr Ala Val Gly Val Arg Phe Met Arg Glu Asn Met Ser Tyr Tyr  
1 5 10 15

Leu Trp

<210> 93  
<211> 18  
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<400> 93  
Tyr Tyr Ala Val Gly Val Arg Phe Met Arg Glu Lys Tyr Gln Tyr Tyr  
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Leu Trp

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sequence

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Asn Thr Tyr Glu Ser Asn Leu Tyr Leu Gln Arg Asp Ser Tyr Tyr Ile  
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Ile Thr Lys Trp  
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<210> 95  
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<400> 95  
Asn Thr Tyr Glu Ser Asn Leu Tyr Ile Gln Arg Asp Ser Tyr Tyr Ile  
1 5 10 15

Ile Thr Lys Trp  
20

<210> 96  
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<400> 96  
Asn Thr Tyr Glu Ser Asn Leu Tyr Leu Gln Arg Asp Ser Tyr Tyr Ile  
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Ile Thr Lys Trp  
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<210> 97



<211> 20  
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Ile Thr Lys Trp  
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<210> 98  
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Ile Thr Lys Trp  
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Ile Thr Lys Trp  
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Ile Thr Lys Trp  
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<210> 101  
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<400> 101

Gln Thr Asp Val Ser Asn Leu Tyr Leu Gln Arg Asp Ser Tyr Tyr Ile  
1 5 10 15

Ile Thr Lys Trp  
20

<210> 102  
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<212> PRT  
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<400> 102  
Ser Thr Tyr Glu Asn Ile Ala Tyr Leu Gln Arg His Asp Tyr Tyr Ile  
1 5 10 15

Ile Thr Lys Trp  
20

<210> 103  
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Ser Thr Tyr Glu Asn Ile Ala Tyr Trp Gln Arg Asp Ser Tyr Tyr Ile  
1 5 10 15

Ile Thr Lys Trp  
20

<210> 104  
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<400> 104  
Asn Thr Tyr Glu Ser Asn Leu Tyr Leu Gln Arg Asn Tyr Tyr Tyr Ile  
1 5 10 15

Ile Thr Lys Trp  
20

<210> 105  
<211> 20  
<212> PRT  
<213> Homo sapiens

<400> 105  
Asn Thr Tyr Glu Ser Asn Leu Tyr Leu Gln Arg Asp Tyr Tyr Tyr Ile  
1 5 10 15

Ile Thr Lys Trp  
20

<210> 106  
<211> 20  
<212> PRT  
<213> Homo sapiens

<400> 106  
Asn Thr Tyr Glu Asn Ile Ala Tyr Ile Gln Arg Asp Ser Tyr Tyr Ile  
1 5 10 15  
Ile Thr Lys Trp  
20

<210> 107  
<211> 11  
<212> PRT  
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<220>  
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peptide

<220>  
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<222> (11)  
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<400> 107  
Ala Gly Gly Glx Pro Ala Thr Pro Pro Ala Xaa  
1 5 10

<210> 108  
<211> 10  
<212> PRT  
<213> Artificial Sequence

<220>  
<223> Description of Artificial Sequence: Synthetic  
peptide

<400> 108  
Ser His Glx Gly Cys Val Glx Pro Ala Val  
1 5 10

<210> 109  
<211> 9  
<212> PRT  
<213> Artificial Sequence

<220>  
<223> Description of Artificial Sequence: Synthetic  
peptide

<400> 109  
Gly His Asp Pro Asp Ser Pro Ala Ala  
1 5

<210> 110  
<211> 9  
<212> PRT  
<213> Artificial Sequence

<220>  
<223> Description of Artificial Sequence: Synthetic  
peptide

<400> 110  
Glu His Val Ala Ser Ser Pro Ala Leu  
1 5

<210> 111  
<211> 9  
<212> PRT  
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<220>  
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peptide

<220>  
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<222> (4)  
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<220>  
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<223> Unknown amino acid

<400> 111  
Met Cys Glx Xaa Gly Met Pro Ala Xaa  
1 5

<210> 112  
<211> 10  
<212> PRT  
<213> Artificial Sequence

<220>  
<223> Description of Artificial Sequence: Synthetic  
peptide

<220>  
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<222> (10)  
<223> Unknown amino acid

<400> 112  
Gly His Gly Ala Asn Asn Asp Pro Ala Xaa  
1 5 10

<210> 113  
<211> 10  
<212> PRT  
<213> Artificial Sequence

<220>  
<223> Description of Artificial Sequence: Synthetic  
peptide

<220>  
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<222> (1)  
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<220>  
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<222> (10)  
<223> Unknown amino acid

<400> 113  
Xaa His Ser Glx Pro Ala Gly Pro Ala Xaa  
1 5 10

<210> 114  
<211> 8  
<212> PRT  
<213> Artificial Sequence

<220>  
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peptide

<220>  
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<222> (8)  
<223> Unknown amino acid

<400> 114  
Met His Ala Asp Asn Pro Val Xaa  
1 5

<210> 115  
<211> 9  
<212> PRT  
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<220>  
<223> Description of Artificial Sequence: Synthetic  
peptide

<220>  
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<222> (9)  
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<400> 115  
Gly His Cys Pro Arg Asn Pro Ala Xaa  
1 5

<210> 116  
<211> 10  
<212> PRT  
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<220>  
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peptide

<220>  
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<222> (10)  
<223> Unknown amino acid

<400> 116  
Xaa His Ser Gly Ala Pro Glx Ala Pro Xaa  
1 5 10

<210> 117  
<211> 9  
<212> PRT  
<213> Artificial Sequence

<220>  
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peptide

<220>  
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<220>  
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<222> (9)  
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<400> 117  
Xaa His Asp Thr Glu His Ala Pro Xaa  
1 5

<210> 118  
<211> 9  
<212> PRT  
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peptide

<400> 118  
Thr Gln Ala Pro Gly Asn Pro Val Leu  
1 5

<210> 119  
<211> 9  
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<220>  
<223> Description of Artificial Sequence: Synthetic  
peptide

<220>  
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<400> 119  
Thr Glx Ala Gly Cys Met Val Pro Xaa  
1 5

<210> 120  
<211> 8  
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<220>  
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peptide

<220>  
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<223> Unknown amino acid

<220>  
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<222> (8)  
<223> Unknown amino acid

<400> 120  
Met Val Xaa Xaa His Pro Val Xaa  
1 5

<210> 121  
<211> 9  
<212> PRT  
<213> Artificial Sequence  
  
<220>  
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peptide

<400> 121  
Ala His Ser Val Pro Ser Pro Ala Phe  
1 5

<210> 122  
<211> 9  
<212> PRT  
<213> Artificial Sequence  
  
<220>  
<223> Description of Artificial Sequence: Synthetic  
peptide

<220>  
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<222> (4)..(5)  
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<400> 122  
Met His Thr Xaa Xaa Pro Ala Pro Val  
1 5

<210> 123  
<211> 9  
<212> PRT  
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<220>  
<223> Description of Artificial Sequence: Synthetic  
peptide

<220>  
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<222> (9)  
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<400> 123  
Pro Gly Ala Ala Val Val Pro Ser Xaa  
1 5

<210> 124  
<211> 9  
<212> PRT  
<213> Artificial Sequence



<220>  
<223> Description of Artificial Sequence: Synthetic  
peptide

<400> 124  
Ile His Thr Pro Glu Asn Pro Val Ile  
1 5

<210> 125  
<211> 9  
<212> PRT  
<213> Artificial Sequence

<220>  
<223> Description of Artificial Sequence: Synthetic  
peptide

<220>  
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<222> (9)  
<223> Unknown amino acid

<400> 125  
Ser His Asp Gly Ser Val Pro Thr Xaa  
1 5

<210> 126  
<211> 5  
<212> PRT  
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<220>  
<223> Description of Artificial Sequence: Peptide  
motif

<400> 126  
Ile Leu Gln Val Pro  
1 5

<210> 127  
<211> 9  
<212> PRT  
<213> Artificial Sequence

<220>  
<223> Description of Artificial Sequence: Synthetic  
peptide

<220>  
<221> MOD\_RES  
<222> (5)..(6)  
<223> Unknown amino acid

<400> 127  
Met Ala His Ser Xaa Xaa Pro Val Phe  
1 5

<210> 128  
<211> 10  
<212> PRT  
<213> Artificial Sequence

<220>  
<223> Description of Artificial Sequence: Synthetic  
peptide

<220>  
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<222> (1)  
<223> Unknown amino acid

<220>  
<221> MOD\_RES  
<222> (3)..(7)  
<223> Unknown amino acid

<400> 128  
Xaa His Xaa Xaa Xaa Xaa Pro Val Phe  
1 5 10

<210> 129  
<211> 9  
<212> PRT  
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<220>  
<223> Description of Artificial Sequence: Synthetic  
peptide

<220>  
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<220>  
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<223> Unknown amino acid

<220>  
<221> MOD\_RES  
<222> (9)  
<223> Unknown amino acid

<400> 129  
Met Xaa Gly Xaa Ser Phe Pro Ala Xaa  
1 5

<210> 130  
<211> 9  
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<220>  
<223> Description of Artificial Sequence: Synthetic  
peptide

<220>  
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<222> (9)  
<223> Unknown amino acid

<400> 130  
Val His Thr Cys Val Asn Pro Val Xaa  
1 5

<210> 131  
<211> 8  
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<220>  
<223> Description of Artificial Sequence: Synthetic  
peptide

<220>  
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<222> (8)  
<223> Unknown amino acid

<400> 131  
Glu Trp His Tyr Pro Val Ser Xaa  
1 5

<210> 132  
<211> 9  
<212> PRT  
<213> Artificial Sequence

<220>  
<223> Description of Artificial Sequence: Synthetic  
peptide

<220>  
<221> MOD\_RES  
<222> (9)  
<223> Unknown amino acid

<400> 132  
Glu Thr Pro Glu His Ala Pro Val Xaa  
1 5

<210> 133  
<211> 18  
<212> PRT  
<213> Artificial Sequence

<220>  
<223> Description of Artificial Sequence: Synthetic  
peptide

<220>  
<221> MOD\_RES  
<222> (8)  
<223> Ile or Leu

<220>  
<221> MOD\_RES  
<222> (14)  
<223> Gln or Lys

<400> 133  
Gly Pro Cys Ala Val Phe Met Xaa Ser Thr Tyr Asn Trp Xaa His Arg  
1 5 10 15

Asp Glu

<210> 134  
<211> 9  
<212> PRT  
<213> Artificial Sequence

<220>  
<223> Description of Artificial Sequence: Synthetic  
peptide

<220>  
<221> MOD\_RES  
<222> (1)..(2)  
<223> Unknown amino acid

<220>  
<221> MOD\_RES  
<222> (8)  
<223> Unknown amino acid

<400> 134  
Xaa Xaa Trp Asp Arg His Thr Xaa Phe  
1 5

<210> 135  
<211> 9  
<212> PRT  
<213> Artificial Sequence

<220>  
<223> Description of Artificial Sequence: Synthetic  
peptide

<400> 135  
Ala Gln Phe Ala Ser Gly Ala Gly Glx  
1 5

<210> 136  
<211> 7  
<212> PRT  
<213> Artificial Sequence

<220>  
<223> Description of Artificial Sequence: Synthetic  
peptide

<220>  
<221> MOD\_RES  
<222> (1)  
<223> Unknown amino acid

<220>  
<221> MOD\_RES  
<222> (3)..(4)  
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<400> 136  
Xaa Gly Xaa Xaa Cys Asp Tyr  
1 5

<210> 137  
<211> 8  
<212> PRT  
<213> Artificial Sequence

<220>  
<223> Description of Artificial Sequence: Synthetic  
peptide

<400> 137  
Gly Ser His Phe Gly Val Ala Tyr  
1 5

<210> 138  
<211> 9  
<212> PRT  
<213> Artificial Sequence

<220>  
<223> Description of Artificial Sequence: Synthetic  
peptide

<400> 138

Asn Gln Glx His Gly Ser Ala Glu Tyr  
1 5

<210> 139  
<211> 11  
<212> PRT  
<213> Artificial Sequence

<220>  
<223> Description of Artificial Sequence: Synthetic  
peptide

<220>  
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<223> Unknown amino acid

<400> 139  
Pro Met Asn Asp Trp Xaa Met Thr Glx Thr Tyr  
1 5 10

<210> 140  
<211> 8  
<212> PRT  
<213> Artificial Sequence

<220>  
<223> Description of Artificial Sequence: Synthetic  
peptide

<400> 140  
Ala Pro Met Ala Arg Gly Glx Tyr  
1 5

<210> 141  
<211> 7  
<212> PRT  
<213> Artificial Sequence

<220>  
<223> Description of Artificial Sequence: Synthetic  
peptide

<400> 141  
Phe Val Ser Asn His Ala Tyr  
1 5

<210> 142  
<211> 8  
<212> PRT  
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<220>

<223> Description of Artificial Sequence: Synthetic peptide

<400> 142

Asn Pro Pro Ala Glx Glx Pro Asn  
1 5

<210> 143

<211> 8

<212> PRT

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Synthetic peptide

<220>

<221> MOD\_RES

<222> (3)..(6)

<223> Unknown amino acid

<400> 143

Thr Gly Xaa Xaa Xaa Xaa Ala Tyr  
1 5

<210> 144

<211> 11

<212> PRT

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Synthetic peptide

<220>

<221> MOD\_RES

<222> (1)

<223> Unknown amino acid

<220>

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<222> (3)

<223> Unknown amino acid

<400> 144

Xaa Gln Xaa Asp Pro Pro Pro Asp Met Glx Tyr  
1 5 10

<210> 145

<211> 8

<212> PRT

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Synthetic peptide

<400> 145

Gly Gln Glx Glx Ala Val Asp Phe  
1 5

<210> 146

<211> 9

<212> PRT

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Synthetic peptide

<400> 146

Ser Gln Phe Gly Gly Gly Ser Gln Tyr  
1 5

<210> 147

<211> 8

<212> PRT

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Synthetic peptide

<400> 147

Ser Gln Phe Asp His Val Thr Tyr  
1 5

<210> 148

<211> 10

<212> PRT

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Synthetic peptide

<220>

<221> MOD\_RES

<222> (3)

<223> Unknown amino acid

<400> 148

Thr Pro Xaa Gly Glu Pro Tyr Glx Ser Tyr  
1 5 10

<210> 149

<211> 7



<212> PRT  
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<220>  
<223> Description of Artificial Sequence: Synthetic  
peptide

<220>  
<221> MOD\_RES  
<222> (1)  
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<220>  
<221> MOD\_RES  
<222> (4)..(5)  
<223> Unknown amino acid

<400> 149  
Xaa Ala Asn Xaa Xaa Val Thr  
1 5

<210> 150  
<211> 7  
<212> PRT  
<213> Artificial Sequence

<220>  
<223> Description of Artificial Sequence: Synthetic  
peptide

<400> 150  
Cys Pro Leu Ser Cys Phe Thr  
1 5

<210> 151  
<211> 9  
<212> PRT  
<213> Artificial Sequence

<220>  
<223> Description of Artificial Sequence: Synthetic  
peptide

<400> 151  
Phe Leu Glx Ala Met Glx Ser Thr Tyr  
1 5

<210> 152  
<211> 9  
<212> PRT  
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<220>  
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peptide

<220>

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<222> (3)

<223> Unknown amino acid

<400> 152

Thr Val Xaa Asp Ser Glx Thr His Tyr

1

5

<210> 153

<211> 10

<212> PRT

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Synthetic  
peptide

<400> 153

Gly Gln Arg Lys Gly Ala Gly Ser Val Phe

1

5

10

<210> 154

<211> 9

<212> PRT

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Synthetic  
peptide

<400> 154

Val Val Ala Pro Ile Thr Thr Gly Tyr

1

5

<210> 155

<211> 9

<212> PRT

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Synthetic  
peptide

<220>

<221> MOD\_RES

<222> (6)..(8)

<223> Unknown amino acid

<400> 155

Val Val Ala Cys Val Xaa Xaa Xaa Tyr

1

5

<210> 156  
 <211> 9  
 <212> PRT  
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 <222> (4)  
 <223> Unknown amino acid  
  
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 Pro Leu Ala Xaa Asn Xaa His Thr Tyr  
   1                  5  
  
 <210> 157  
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 Phe Gln Ala Arg Xaa Thr Glu Tyr  
   1                  5  
  
 <210> 158  
 <211> 9  
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 <400> 158  
 Val Gly Tyr Val Asp Asp Thr Gln Phe  
   1                  5

<210> 159  
<211> 10  
<212> PRT  
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<220>  
<223> Description of Artificial Sequence: Synthetic  
peptide

<220>  
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<222> (6)..(9)  
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<400> 159  
Ala Ala Phe Cys Gly Xaa Xaa Xaa Xaa Val  
1 5 10

<210> 160  
<211> 7  
<212> PRT  
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<220>  
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peptide

<220>  
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<222> (4)..(5)  
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<400> 160  
Tyr Leu His Xaa Xaa Glu Thr  
1 5

<210> 161  
<211> 9  
<212> PRT  
<213> Artificial Sequence

<220>  
<223> Description of Artificial Sequence: Synthetic  
peptide

<400> 161  
Ile Leu Gly Pro Pro Gly Ser Val Tyr  
1 5

<210> 162  
<211> 8  
<212> PRT

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Synthetic peptide

<220>

<221> MOD\_RES

<222> (1)

<223> Unknown amino acid

<400> 162

Xaa Leu Gly Asp Val Asn Met Tyr

1

5

<210> 163

<211> 4

<212> PRT

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Peptide motif

<400> 163

Leu Val Gln Pro

1

<210> 164

<211> 9

<212> PRT

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Synthetic peptide

<220>

<221> MOD\_RES

<222> (5)

<223> Unknown amino acid

<400> 164

Thr Ala Arg Val Xaa Ser Val Glu Tyr

1

5

<210> 165

<211> 9

<212> PRT

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Synthetic peptide

<220>  
 <221> MOD\_RES  
 <222> (8)  
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<400> 165  
 Ala Glu Phe Trp Ala Cys Glx Xaa Tyr  
 1 5

<210> 166  
 <211> 10  
 <212> PRT  
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<220>  
 <223> Description of Artificial Sequence: Synthetic peptide

<400> 166  
 Tyr Met Ile Asp Pro Ser Gly Val Ser Tyr  
 1 5 10

<210> 167  
 <211> 9  
 <212> PRT  
 <213> Artificial Sequence

<220>  
 <223> Description of Artificial Sequence: Synthetic peptide

<220>  
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<220>  
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 <222> (4)  
 <223> Unknown amino acid

<400> 167  
 Xaa Val Glu Xaa Thr Thr Asp Tyr Tyr  
 1 5

<210> 168  
 <211> 9  
 <212> PRT  
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<220>  
 <223> Description of Artificial Sequence: Synthetic peptide

<220>  
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<222> (4)  
<223> Unknown amino acid

<400> 168  
Ala Ala Gly Xaa Gly Pro Thr Phe Tyr  
1 5

<210> 169  
<211> 11  
<212> PRT  
<213> Artificial Sequence

<220>  
<223> Description of Artificial Sequence: Synthetic  
peptide

<400> 169  
Ile Ala Val Gly Tyr Val Asp Asp Thr Gln Phe  
1 5 10

<210> 170  
<211> 9  
<212> PRT  
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<220>  
<223> Description of Artificial Sequence: Synthetic  
peptide

<220>  
<221> MOD\_RES  
<222> (5)  
<223> Unknown amino acid

<400> 170  
Val Ala Phe Val Xaa Phe Val Gly Tyr  
1 5

<210> 171  
<211> 8  
<212> PRT  
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<220>  
<223> Description of Artificial Sequence: Synthetic  
peptide

<220>  
<221> MOD\_RES  
<222> (6)  
<223> Unknown amino acid

<400> 171  
Tyr Asn Arg Trp Ser Xaa Glu Phe  
1 5

<210> 172  
<211> 9  
<212> PRT  
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<220>  
<223> Description of Artificial Sequence: Synthetic  
peptide

<220>  
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<222> (5)..(7)  
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<400> 172  
Ala Leu Met Pro Xaa Xaa Xaa Asn Tyr  
1 5

<210> 173  
<211> 9  
<212> PRT  
<213> Artificial Sequence

<220>  
<223> Description of Artificial Sequence: Synthetic  
peptide

<400> 173  
Asp Leu Ala Ser Met Leu Asn Arg Tyr  
1 5

<210> 174  
<211> 9  
<212> PRT  
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<220>  
<223> Description of Artificial Sequence: Synthetic  
peptide

<400> 174  
Met Leu Asn Arg Tyr Lys Leu Ile Tyr  
1 5

<210> 175  
<211> 9  
<212> PRT  
<213> Artificial Sequence



<220>  
<223> Description of Artificial Sequence: Synthetic  
peptide

<400> 175  
Pro Leu Glu Lys Gln Leu Phe Tyr Tyr  
1 5

<210> 176  
<211> 9  
<212> PRT  
<213> Artificial Sequence

<220>  
<223> Description of Artificial Sequence: Synthetic  
peptide

<400> 176  
Tyr Gln Leu Arg Cys His Leu Ser Tyr  
1 5

<210> 177  
<211> 9  
<212> PRT  
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<220>  
<223> Description of Artificial Sequence: Synthetic  
peptide

<400> 177  
Ala Leu Ser Ile Asn Gly Asp Lys Phe  
1 5

<210> 178  
<211> 9  
<212> PRT  
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<220>  
<223> Description of Artificial Sequence: Synthetic  
peptide

<400> 178  
Asp Leu Pro Asp Leu Arg Gly Pro Phe  
1 5

<210> 179  
<211> 9  
<212> PRT  
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<220>  
<223> Description of Artificial Sequence: Synthetic peptide

<400> 179  
Phe Val Pro Asn Leu Lys Asp Met Phe  
1 5

<210> 180  
<211> 9  
<212> PRT  
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<220>  
<223> Description of Artificial Sequence: Synthetic peptide

<400> 180  
Ala Val Thr Met Thr Ala Ala Ser Tyr  
1 5

<210> 181  
<211> 9  
<212> PRT  
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<220>  
<223> Description of Artificial Sequence: Synthetic peptide

<400> 181  
Thr Met Phe Glu Val Ser Val Ala Phe  
1 5

<210> 182  
<211> 9  
<212> PRT  
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<220>  
<223> Description of Artificial Sequence: Synthetic peptide

<400> 182  
Asp Leu Arg Trp Leu Ala Lys Ser Phe  
1 5

<210> 183  
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<212> PRT  
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<220>

<223> Description of Artificial Sequence: Synthetic peptide

<400> 183

His Leu Thr Thr Glu Lys Gln Glu Tyr  
1 5

<210> 184

<211> 9

<212> PRT

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Synthetic peptide

<400> 184

Ala Leu Arg Leu Ala Thr Val Gly Tyr  
1 5

<210> 185

<211> 9

<212> PRT

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Synthetic peptide

<400> 185

Ala Leu Gly Thr Glu Ser Gly Leu Phe  
1 5

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Ala Val Ser Asn Ala Val Asp Gly Phe  
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<210> 187

<211> 9

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peptide

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Ala Leu Tyr Glu Ala Ser Thr Thr Tyr  
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Arg Gln Ile Pro Lys Ile Gln Asn Phe  
1 5

<210> 189

<211> 9

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<400> 189

Ile Leu Ser Ser Asn Tyr Phe Asp Phe  
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<210> 190

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Thr Val Met Glu Ile Ala Gly Leu Tyr  
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1 5 10

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Tyr Leu Ser Ser Ser Leu Phe  
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Ser Ala Tyr Asn Arg His Pro Leu Phe

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His Thr Val Met Arg Glu Thr Leu Phe

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Glu Ser Gly Leu Phe Ser Pro Cys Tyr

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<210> 274

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Xaa Xaa Val Xaa Xaa Gly His Xaa Tyr  
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<211> 8

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<400> 290

Xaa Xaa Xaa Glx Ala Arg Gly Tyr  
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<210> 291

<211> 8

<212> PRT

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<220>

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<400> 291

Asp Pro His Ala Pro Pro Glx Tyr  
1 5

<210> 292

<211> 9

<212> PRT

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<223> Unknown amino acid

<400> 292

Ala Val Pro Ser Xaa His Xaa Xaa Tyr

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5

<210> 293

<211> 9

<212> PRT

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<220>

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<400> 293

Xaa Ala Glx Val Glx Met Thr Ala Tyr

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5

<210> 294

<211> 9

<212> PRT

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Synthetic peptide

<400> 294

Ala Leu Asn Gly Arg Val Thr Met Tyr

1

5

<210> 295

<211> 10

<212> PRT

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<210> 296  
<211> 9  
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<400> 296  
Xaa Gln Xaa Xaa Ala Gly Gly Glx Tyr  
1 5

<210> 297  
<211> 9  
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<220>  
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<400> 297  
Gly Gln His Ala Ser Val Xaa Ser Tyr  
1 5

<210> 298  
<211> 10  
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<220>

<221> MOD\_RES

<222> (1)..(2)

<223> Unknown amino acid

<400> 298

Xaa Xaa Ala Ala His Val Pro Pro Gly Tyr  
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<210> 299

<211> 10

<212> PRT

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Synthetic peptide

<400> 299

Phe Met Asp Val Gly Ala Pro Thr Val Tyr  
1 5 10

<210> 300

<211> 9

<212> PRT

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Synthetic peptide

<400> 300

Ala Gln Ala Ala Pro Phe Ala Gly Tyr  
1 5

<210> 301

<211> 8

<212> PRT

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Synthetic peptide

<400> 301

Val Val Val Phe Gly Val Glx Phe  
1 5

<210> 302

<211> 8



<212> PRT  
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<220>  
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peptide

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<400> 302  
Ala Gln Met Xaa Xaa Ser Glu Tyr  
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<210> 303  
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<220>  
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peptide

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<400> 303  
Xaa Xaa Xaa Xaa Phe Gly His Tyr  
1 5

<210> 304  
<211> 8  
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<220>  
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peptide

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<400> 304  
Ala Leu Trp Xaa Xaa Pro Glx Phe  
1 5

<210> 305  
<211> 7

<212> PRT  
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<220>

<223> Description of Artificial Sequence: Synthetic peptide

<400> 305

Val Pro His Glx Asn Ala Tyr  
1 5

<210> 306

<211> 10

<212> PRT

<213> Artificial Sequence

<220>

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<223> Unknown amino acid

<400> 306

Xaa Xaa Xaa Xaa Xaa Gly His Gly Gly Tyr  
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<210> 307

<211> 9

<212> PRT

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Synthetic peptide

<400> 307

Gly Gln Tyr Val Val Glx Pro Thr Tyr  
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<210> 308

<211> 9

<212> PRT

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Synthetic peptide

<400> 308

Pro Met Phe Asp Pro Pro Glx Thr Phe  
1 5

<210> 309  
<211> 8  
<212> PRT  
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<400> 309  
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<210> 310  
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<400> 310  
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<400> 311  
Glu Ser Xaa Pro Asn Asn Val Pro Tyr  
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<210> 312  
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<212> PRT

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Synthetic peptide

<400> 312

Leu Ala His Thr Glu Cys Pro Arg Gly Tyr  
1 5 10

<210> 313

<211> 9

<212> PRT

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Synthetic peptide

<400> 313

Val Gln Gly Pro Val Gly Val Gln Tyr  
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<210> 314

<211> 10

<212> PRT

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Synthetic peptide

<220>

<221> MOD\_RES

<222> (3)

<223> Unknown amino acid

<400> 314

Arg Gly Xaa Gly Val Ala Gly Thr Ala Phe  
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<210> 315

<211> 10

<212> PRT

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Synthetic peptide

<400> 315

Thr Gly Ala Pro Val Ser Glu Glu Gly Tyr  
1 5 10

<210> 316  
<211> 9  
<212> PRT  
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peptide

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<400> 316  
Val Gln Xaa Tyr Tyr Gly Ser Val Val  
1 5

<210> 317  
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<220>  
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peptide

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<222> (6)  
<223> Unknown amino acid

<400> 317  
Glu Pro Ala Met Val Xaa Glx Cys Phe  
1 5

<210> 318  
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<212> PRT  
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<220>  
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<220>  
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<400> 318  
Gly Gln Pro Gly Ala Pro Xaa Gly Gly Glx Tyr  
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<210> 319  
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 Thr Pro Pro Thr Arg Arg Glu Ser Tyr  
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<400> 322  
Phe Pro Thr Asp Arg Arg Ser Gln Phe  
1 5

<210> 323  
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<220>  
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peptide

<220>  
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<400> 323  
Tyr Thr Gly Val Ser Tyr Xaa His Phe  
1 5

<210> 324  
<211> 9  
<212> PRT  
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<220>  
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peptide

<400> 324  
Ala Gln Ala Ser Ala Pro Asp Ala Tyr  
1 5

<210> 325  
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<220>  
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peptide

<220>  
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<400> 325  
Val Gln Tyr Tyr Xaa Pro Phe  
1 5

<210> 326  
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 <211> 11  
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 <211> 8  
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<400> 328  
Xaa Gln Tyr Thr Val Gly Tyr Phe  
1 5

<210> 329  
<211> 10  
<212> PRT  
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<220>  
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peptide

<400> 329  
Pro Leu Phe Gly Gln Thr Ala Gly Gln Tyr  
1 5 10

<210> 330  
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<220>  
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<400> 330  
Ala Xaa Xaa Xaa Xaa Gln Xaa Glu Tyr  
1 5

<210> 331  
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<220>  
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peptide

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<400> 331  
Glx Gly Tyr Gly Asn Pro Xaa Asn Gly Ala Tyr  
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<210> 332  
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<400> 332  
Val Gln Gly Pro Val Gly Thr Asp Phe  
1 5

<210> 333  
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<220>  
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peptide

<220>  
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<400> 333  
Val Ala Gly Gly Trp Xaa Xaa Xaa Phe  
1 5

<210> 334  
<211> 9  
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<220>  
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<220>  
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<220>  
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<400> 334  
Xaa Ala Gly Phe Phe Xaa Xaa Glu Tyr  
1 5

<210> 335  
<211> 10  
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<220>  
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peptide

<220>  
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<222> (4)  
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<400> 335  
Ser Gly Ala Xaa Asp Arg Ala Tyr Glx Phe  
1 5 10

<210> 336  
<211> 9  
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<220>  
<223> Description of Artificial Sequence: Synthetic  
peptide

<220>  
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<222> (3)..(5)  
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<400> 336  
Thr Pro Xaa Xaa Xaa Ala Glx Ala Phe  
1 5

<210> 337  
<211> 9  
<212> PRT  
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<220>  
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peptide

<220>  
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<222> (9)  
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<400> 337  
Val Val Ala Thr Glx Asn Glx Glx Xaa  
1 5

<210> 338  
<211> 8  
<212> PRT  
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<220>  
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peptide

<220>  
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<222> (5)..(7)  
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<400> 338  
Tyr Met Val Thr Xaa Xaa Xaa Phe  
1 5

<210> 339  
<211> 10  
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<220>  
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peptide

<220>  
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<222> (7)  
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<400> 339  
Ala Leu Gly Ser Glx Ala Xaa Met Pro Phe  
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<210> 340  
<211> 10  
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<220>  
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peptide

<220>  
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<400> 340  
Ala Pro Ala Val Xaa Xaa Xaa Val Gly Tyr  
1 5 10

<210> 341  
<211> 9  
<212> PRT  
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<220>  
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peptide

<220>  
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<400> 341  
Pro Val Pro Asn Val Arg Xaa Asn Tyr  
1 5

<210> 342  
<211> 9  
<212> PRT  
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<220>  
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peptide

<400> 342  
Thr Leu Glu Gly Trp Met Ser Glx Tyr  
1 5

<210> 343  
<211> 9  
<212> PRT  
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<220>  
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<400> 343  
Tyr Met Val Cys Asn Ala Glu Glu Tyr  
1 5

<210> 344  
<211> 9  
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<220>  
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<220>  
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<400> 344  
Ala Gln His Pro Ser Ala Xaa Arg Phe  
1 5

<210> 345  
<211> 9  
<212> PRT  
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<220>  
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<400> 345  
Gly Leu Gly Glx Thr Ser Ala Glu Phe  
1 5

<210> 346  
<211> 9  
<212> PRT  
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<220>  
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<220>  
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<400> 346  
Val Met Gly Xaa Thr Asn Ala Asn Phe  
1 5

<210> 347  
<211> 9  
<212> PRT  
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<220>  
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<220>

<221> MOD\_RES  
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<400> 347  
Asn Ala Xaa Gly Arg Glu Ser Ser Phe  
1 5

<210> 348  
<211> 9  
<212> PRT  
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<220>  
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peptide

<400> 348  
Ala Met Asn Pro Thr Asn Thr Val Phe  
1 5

<210> 349  
<211> 9  
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<400> 349  
Xaa Gln Ala Pro Ala Xaa Phe Val Tyr  
1 5

<210> 350  
<211> 9  
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<220>  
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peptide

<220>

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<222> (5)..(7)  
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<400> 350  
Ala Leu Phe Xaa Xaa Xaa Phe Thr Tyr  
1 5

<210> 351  
<211> 9  
<212> PRT  
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<220>  
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<400> 351  
Xaa Gln Xaa Asn Ala Tyr Xaa Ser Tyr  
1 5

<210> 352  
<211> 10  
<212> PRT  
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<220>  
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peptide

<400> 352  
Gly Leu Ala Arg Cys Ser Glx Val Glu Tyr  
1 5 10

<210> 353  
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<212> PRT  
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<220>  
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<220>  
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<400> 353  
Ser Gln Xaa Ala Ala Gly Val Asp Val Phe  
1 5 10

<210> 354  
<211> 9  
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<220>  
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<220>  
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<222> (7)..(8)  
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<400> 354  
Pro Gln Gly Glx Met Ala Xaa Xaa Tyr  
1 5

<210> 355  
<211> 9  
<212> PRT  
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<220>  
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<220>  
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<222> (1)  
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<400> 355  
Xaa Val Phe Val Ser His Thr Thr Phe  
1 5

<210> 356  
<211> 10  
<212> PRT  
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<220>  
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<220>  
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<222> (2)  
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<400> 356  
His Xaa Thr Gly Asn Glu Ala Thr Ser Phe  
1 5 10

<210> 357  
<211> 9  
<212> PRT  
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<220>  
<223> Description of Artificial Sequence: Synthetic peptide

<220>  
<221> MOD\_RES  
<222> (1)  
<223> Unknown amino acid

<400> 357  
Xaa Gln Gly His His Glu Met Phe Tyr  
1 5

<210> 358  
<211> 9  
<212> PRT  
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<220>  
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<220>  
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<222> (4)  
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<400> 358  
Ala Ala Gly Xaa Gly Pro Thr Phe Tyr  
1 5

<210> 359  
<211> 9  
<212> PRT  
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<220>  
<223> Description of Artificial Sequence: Synthetic  
peptide

<220>  
<221> MOD\_RES  
<222> (5)  
<223> Unknown amino acid

<400> 359  
Val Ala Phe Val Xaa Phe Val Gly Tyr  
1 5

<210> 360  
<211> 9  
<212> PRT  
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<220>  
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peptide

<220>  
<221> MOD\_RES  
<222> (5)..(7)  
<223> Unknown amino acid

<400> 360  
Ala Leu Met Pro Xaa Xaa Xaa Asn Tyr  
1 5

<210> 361  
<211> 8  
<212> PRT  
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<220>  
<223> Description of Artificial Sequence: Synthetic  
peptide

<220>  
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<222> (6)  
<223> Unknown amino acid

<400> 361  
Tyr Asn Arg Trp Ser Xaa Glu Phe  
1 5

<210> 362  
<211> 9  
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peptide

<220>  
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<222> (1)..(2)  
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<400> 362  
Xaa Xaa Glx Asp Arg Asn Val Thr Phe  
1 5

<210> 363  
<211> 9  
<212> PRT  
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<220>  
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peptide

<220>  
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<400> 363  
Val Val Thr Met Xaa Xaa Xaa Glx Tyr  
1 5

<210> 364  
<211> 8  
<212> PRT  
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<220>  
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peptide

<400> 364  
Ala Glx Val Glu Cys Glu Thr Tyr  
1 5

<210> 365  
<211> 9  
<212> PRT  
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<220>  
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peptide

<400> 365

Ala Gln Phe Ala Ser Gly Ala Gly Glx  
1 5

<210> 366  
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<220>  
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peptide

<220>  
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<400> 366  
Glx Gly Xaa Gly Gly Gly Pro Ala Thr Ser Tyr  
1 5 10

<210> 367  
<211> 7  
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<220>  
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peptide

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<220>  
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<222> (3)..(4)  
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<400> 367  
Xaa Gly Xaa Xaa Cys Asp Tyr  
1 5

<210> 368  
<211> 9  
<212> PRT  
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<220>  
<223> Description of Artificial Sequence: Synthetic  
peptide

<400> 368

Asn Gln Glx His Gly Ser Ala Glu Tyr  
1 5

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<400> 369  
Ala Pro Met Ala Arg Gly Glx Tyr  
1 5

<210> 370  
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<400> 370  
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<210> 371  
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<400> 371  
Ala Ala Ser Ser Glx Val Xaa Xaa Pro Pro Glx Tyr  
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<210> 372

<211> 8  
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Asn Pro Pro Ala Glx Glx Pro Asn  
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<210> 373  
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Ala Cys Gly Gly Cys Gly Glx Asp Tyr  
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<210> 374  
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<400> 375

Gly Gln Glx Glx Ala Val Asp Phe  
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<210> 376

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<400> 376

Thr Pro Xaa Gly Glu Pro Tyr Glx Ser Tyr  
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<400> 377

Gly Pro Xaa Xaa Xaa Pro Glx Tyr  
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<210> 378

<211> 8

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<400> 378

Ala Pro Glx Tyr Pro Pro Pro Pro



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<210> 379

<211> 9

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Gly Glx Val Cys Thr Pro Gly Ser Phe

1

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<210> 380

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<400> 380

Cys Pro Leu Ser Cys Phe Thr

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<210> 381

<211> 9

<212> PRT

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<223> Description of Artificial Sequence: Synthetic peptide

<400> 381

Ser Gln Phe Gly Gly Gly Ser Gln Tyr

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<210> 382

<211> 9

<212> PRT

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<400> 382

Ala Ser Gly Phe Asn Gly Ser Glx Tyr

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<400> 391  
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<210> 403  
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<210> 405  
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<400> 405  
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1 5

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<400> 408  
Ala Asn His Ser Val Arg Asp Thr Tyr  
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<210> 409  
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<400> 412  
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<210> 413  
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<400> 414  
Ala Glx Tyr Glx Ala Glx Val Val Phe  
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<400> 415  
Ala Glx Phe Xaa Xaa Xaa Glx Xaa Tyr  
1 5

<210> 416  
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<400> 416  
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<400> 417  
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<210> 418  
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<220>  
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<400> 418

Ala His Ala Val Gln Arg Val Val Tyr  
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<210> 419  
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<400> 419  
Thr Glx Xaa Thr Val Val Xaa Asn Tyr  
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<400> 421

Gly Ser His Ser Met Arg Tyr Phe  
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<210> 422  
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<400> 423  
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<400> 424  
Gln Pro Gly Pro Gln Ile Val Tyr  
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Ala Asn Xaa Val Glx Xaa Glu Tyr  
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<210> 427

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<400> 427

Gly Glx Xaa Xaa Xaa Glx Gly Xaa Xaa Tyr  
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<210> 428  
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1 5

<210> 429  
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<400> 429  
Tyr Asn Xaa Xaa Xaa Glx Xaa Phe  
1 5

<210> 430  
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<400> 430  
Xaa Met Xaa Xaa Ser Tyr Glx Asn Phe  
1 5

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1 5

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<400> 433  
Xaa Gly Ala Xaa Ser Asn Xaa Xaa Glu Phe  
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<210> 434  
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<220>  
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<400> 434  
Arg Glx Ala Ala Tyr Arg Xaa Thr Tyr  
1 5

<210> 435  
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<220>  
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peptide

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<400> 435  
Thr Asn Xaa His Asp Gly Asp Gly Ala Thr Glx Tyr  
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<210> 436  
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<400> 436  
Xaa Xaa Trp Asp Arg His Thr Xaa Phe  
1 5

<210> 437  
<211> 8  
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peptide

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Gly Ser His Phe Gly Val Ala Tyr  
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1 5

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1 5

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peptide

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<400> 444  
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1 5

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<211> 9  
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<220>  
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1 5

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<220>

<223> Description of Artificial Sequence: Synthetic peptide

<400> 446

Ser Gln Phe Asp His Val Thr Tyr  
1 5

<210> 447

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<212> PRT

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Xaa Pro Xaa Xaa Gly Glx Asp Glu Val  
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Asn Gly Tyr Asp Gly Pro Asn Ala Gly Tyr  
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<210> 449

<211> 10

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<400> 449  
Thr Pro Xaa Gly Glu Pro Tyr Glx Ser Tyr  
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<400> 450  
Xaa Ala Asn Xaa Xaa Val Thr  
1 5

<210> 451  
<211> 8  
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<400> 451  
Met Pro His Ser Gly Tyr Gly Phe  
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<210> 452  
<211> 7  
<212> PRT  
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<400> 452  
Cys Pro Leu Ser Cys Phe Thr

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<210> 453  
<211> 9  
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<400> 453  
Xaa Xaa Xaa Xaa Xaa Pro Gly Phe Tyr  
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<400> 454  
Xaa Ala Xaa Pro His Pro Met Gly Tyr  
1 5

<210> 455  
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<220>  
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<400> 455  
Ala Gln Thr Val Gly Tyr Gly Glu Tyr



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<210> 456

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<400> 456

Phe Leu Glx Ala Met Glx Ser Thr Tyr

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<210> 457

<211> 9

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<400> 457

Thr Val Xaa Asp Ser Glx Thr His Tyr

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<210> 458

<211> 9

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<400> 458

Thr Pro Xaa Xaa Ala Arg Ala Pro Thr

1

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<210> 459

<211> 7

<212> PRT  
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<220>  
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<400> 459  
Ser Glu His Asp Arg Met Tyr  
1 5

<210> 460  
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<220>  
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<400> 460  
Thr Gly Asn Cys Ser Gly Thr Gly Thr Tyr  
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<210> 461  
<211> 9  
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<220>  
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<400> 461  
Ala Gln Val Asn Pro Ser Xaa Thr Tyr  
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<210> 462  
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<220>  
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<400> 462

Ser Pro Gly Ala Glu Thr Arg Ala Xaa Tyr  
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<400> 463

Tyr Leu Gly Xaa Xaa Xaa Gly Ala Phe  
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<210> 464

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<400> 464

Xaa Thr Ser Phe Met Glx Val Tyr  
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<210> 465

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<400> 465

Xaa Pro Xaa Xaa Xaa Pro Ser Ser Gly Tyr  
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<400> 466

Thr Pro Xaa Xaa Xaa Gly Arg Met Tyr  
1 5

<210> 467

<211> 8

<212> PRT

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<400> 467

Pro Met Phe Asp Glx Glx Val Tyr  
1 5

<210> 468

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<400> 468

Tyr Leu Xaa Xaa Xaa Arg Thr Phe  
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<212> PRT

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<400> 469

Ala Gln Glu His Gly Cys Ala Ala Glx Phe  
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<210> 470

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<400> 470

Xaa Met Xaa Xaa Xaa Gly Val His Asp Tyr  
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<210> 471

<211> 9

<212> PRT

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<220>

<223> Description of Artificial Sequence: Synthetic  
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<222> (4)..(5)

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<400> 471

Tyr Val Ser Xaa Xaa Arg Asn Gln Tyr  
1 5

<210> 472

<211> 10

<212> PRT

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Synthetic  
peptide

<400> 472

Ala Gln Tyr Ala Ala Gly Glu Ser Phe Tyr  
1 5 10

<210> 473

<211> 9

<212> PRT

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Synthetic  
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<400> 473

Thr Pro His Thr Glx His Asp Glu Tyr  
1 5

<210> 474

<211> 8

<212> PRT

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<220>

<223> Description of Artificial Sequence: Synthetic  
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<223> Unknown amino acid

<400> 474

Tyr Met Xaa Xaa Xaa Phe Met Tyr  
1 5

<210> 475

<211> 10

<212> PRT

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<220>

<223> Description of Artificial Sequence: Synthetic peptide

<400> 475

Asp Pro His Tyr Val Ser Gly His Glx Phe  
1 5 10

<210> 476

<211> 8

<212> PRT

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Synthetic peptide

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<400> 476

Met Val Gly Xaa Xaa Pro Ala Thr  
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<210> 477

<211> 10

<212> PRT

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<223> Description of Artificial Sequence: Synthetic peptide

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<223> Unknown amino acid

<400> 477

Glx Ala Ser Pro Gly Glu Xaa Thr Ser Tyr  
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<210> 478

<211> 9

<212> PRT

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<400> 478  
Val Val Ala Pro Ile Thr Thr Gly Tyr  
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<210> 479  
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<400> 479  
Val Val Ala Cys Val Xaa Xaa Xaa Tyr  
1 5

<210> 480  
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<400> 480  
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1 5

<210> 481  
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<400> 481  
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<210> 482  
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<400> 483

Xaa Pro Xaa Met Pro Gly Xaa Ala Tyr

1

5

<210> 484

<211> 8

<212> PRT

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<400> 484

His Thr Thr Ser Glx Asn Ala Tyr

1

5

<210> 485

<211> 10

<212> PRT

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<223> Description of Artificial Sequence: Synthetic peptide

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Met Ala Ala Met Val Gly Val Ala Val Tyr

1

5

10

<210> 486

<211> 9

<212> PRT

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<400> 486

Gly Pro Glx Val Met Glx His Gly Tyr

1

5

<210> 487

<211> 8

<212> PRT

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<400> 487  
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<210> 488  
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<400> 489  
Ala Ala Ala Xaa Val Xaa Xaa Xaa Val Thr Tyr  
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<400> 490  
Xaa Pro Glu Met Gly Glx Phe Ser Tyr  
1 5

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<400> 491  
Tyr Val Xaa Xaa Val Arg Xaa Val Phe  
1 5

<210> 492  
<211> 9  
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<400> 492  
Phe Val Thr Xaa Asn Xaa Glu Glu Tyr  
1 5

<210> 493  
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<210> 494  
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Gly Ser Xaa Xaa Xaa Ser Tyr Thr Tyr  
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<210> 495  
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Tyr Val Ala Xaa Xaa Xaa Pro Ala Phe  
1 5

<210> 496  
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<400> 496  
Val Gly Tyr Xaa Xaa Ala His Pro Gly Phe  
1 5 10

<210> 497  
<211> 10  
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Glx Ala Thr Asn Ser Val Thr Ser Thr Tyr  
1 5 10

<210> 498  
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<400> 498  
Xaa Xaa Xaa Xaa Xaa Xaa Ser Thr Tyr  
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<210> 499  
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<210> 500

<211> 10

<212> PRT

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<220>

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<400> 500

Ser	Pro	Thr	Tyr	Thr	His	Ala	Val	Ala	Phe
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<400> 501

Met	Pro	Ala	Xaa	Xaa	Met	Val	Met	Ala	Phe
1				5					10

<210> 502

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<220>

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<400> 502  
Ala Ala Phe Cys Gly Xaa Xaa Xaa Xaa Val  
1 5 10

<210> 503  
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<220>  
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peptide

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<400> 503  
Ser Pro Asn Glu Asp Xaa Met Glx Val Phe  
1 5 10

<210> 504  
<211> 9  
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<220>  
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<400> 504  
Val Ala Ala Thr Ala Gly Ala Val Phe  
1 5

<210> 505  
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<220>  
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<222> (4)..(5)  
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<400> 505  
Tyr Leu His Xaa Xaa Glu Thr  
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<210> 506  
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<400> 506  
Thr Ala Phe Pro Phe Val Phe  
1 5

<210> 507  
<211> 9  
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peptide

<400> 507  
Ile Leu Gly Pro Pro Gly Ser Val Tyr  
1 5

<210> 508  
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<220>  
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peptide

<220>  
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<400> 508  
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Tyr Gly Xaa Xaa Xaa Val Xaa Ser Met  
1 5

<210> 510  
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<220>  
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peptide

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<400> 510  
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<210> 511  
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<220>  
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peptide

<400> 511  
Asp Pro Pro Cys Trp Gly Val Ser Phe  
1 5

<210> 512  
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<400> 512  
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1 5

<210> 513  
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peptide

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<400> 513  
Thr Ala Arg Val Xaa Ser Val Glu Tyr  
1 5

<210> 514  
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<220>  
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<210> 515  
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<220>  
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<400> 515  
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<210> 516  
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<220>  
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<400> 516  
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1 5 10

<210> 517  
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<220>  
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<400> 517  
Ala Glu Ile Leu Gln Val Ile Tyr  
1 5

<210> 518  
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<220>  
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<400> 518  
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1 5

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<220>  
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<400> 519  
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1 5

<210> 520  
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<400> 520  
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<210> 521  
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<220>  
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<400> 521  
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<210> 522  
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<400> 522  
Xaa Pro Val Val Pro Ala Ala Glx Thr Tyr  
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<210> 523  
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<400> 523  
Tyr Met Ile Asp Pro Ser Gly Val Ser Tyr  
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<400> 524  
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<210> 525  
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<220>  
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<220>  
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<400> 525

Asn His Ala Val Gly Xaa Xaa Val Ser Met  
1 5 10

<210> 526  
<211> 10  
<212> PRT  
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<220>  
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peptide

<400> 526  
His Asn Val Phe Glx Pro Thr Ser Asn Ala  
1 5 10

<210> 527  
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<220>  
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peptide

<220>  
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<400> 527  
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<210> 528  
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<210> 551

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<210> 576

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Tyr His His Asp Xaa Val Xaa  
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<400> 610

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Ala Leu Met Pro Xaa Xaa Xaa Asn Tyr  
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<210> 630

<211> 88

<212> DNA

<213> Unknown Organism

<220>

<223> Description of Unknown Organism: Bacterial expression vector

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<221> CDS

<222> (35)..(85)

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Gly Gly Gly Leu Asn Asp Ile  
1 5

ttc gag gct cag aaa atc gaa tgg cac gaa taa  
Phe Glu Ala Gln Lys Ile Glu Trp His Glu  
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88

<210> 631  
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<212> PRT  
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<220>  
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substrate peptide

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1 5 10 15

Glu

<210> 632  
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<212> DNA  
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<220>  
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Gly Gly Gly Leu Asn Asp  
1 5

atc ttc gag gct cag aaa atc gaa tgg cac gaa taa 89  
Ile Phe Glu Ala Gln Lys Ile Glu Trp His Glu  
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Gly Gly Gly Leu Asn Asp  
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atc ttc gag gct cag aaa atc gaa tgg cac gaa taa 90  
Ile Phe Glu Ala Gln Lys Ile Glu Trp His Glu  
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<210> 634  
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<210> 635  
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<400> 635  
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<210> 636  
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<210> 638

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